



JOB SHOP

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CENTRO LASER

Centro Laser is a company specializing in sheet metal and tube cutting. It is based in Santorso (Vicenza, Italy) and is one of five divisions of the of the SOVEM Group. The Group provides a full range of metal fabrication services including, that include cutting, metal stamping, heat treatment, welding and assembly.

In 1977, four craftsmen from the province of Vicenza (Italy) decided to join together, to form a welding job shop and established SOVEM S.r.l.. Over the course of time the company's activities expanded from its early days of just welding. Its first major investment was and automated punching machine back in 1986. Today's SOVECAME, through its five divisions employs 65 workers, and an annual turnover of € 10 million.

"SOVEM generally operates as a subcontractor servicing local companies to which SOVEM supplies metal components and assemblies intended for various industrial sectors: construction, medical, textiles, packaging, energy, food, and so on," Mr. Siro Viero (a SOVEM's partner) explained, together with Mr. Dalla

Costa, another partner, who added: “The SOVEM companies mainly consist of fabrication enterprises specializing in specific machining operations such as cutting, bending, welding, finishing, heat treatment and assembling”.

Centro Laser S.r.l. came into existence as a cutting department within SOVEM and, then, was spun off the latter to become a separate enterprise on its own with a different business name. Mr. Adriano Giacobbe, the managing director, told us about the company’s early days: “We purchased what was probably one of the very first sheet metal laser cutting systems in this area: no similar equipment was available locally and the only option at that time involved travelling all the way to Padova or Verona to find another laser cutting shop”. That really hit the nail on the head: Centro Laser managed to purchase, within a couple of years (i.e. by 1998), a second laser machine. Then the company went through continuous expansion until they came into contact with ADIGE-SYS in 2004-2005, when Centro Laser purchased a reconditioned, second-hand ADILAS sheet metal cutting system.

The collaboration with BLM GROUP stimulated the interest in tube fabrication; the first combination machine (LT COMBO) was purchased in 2007. “Jumping directly into a dedicated Lasertube system would have been unadvisable,” Mr. Dalla Costa remarked. “The marketplace was not there yet to demand that type of system, the workload not available to justify such a purchase. **Instead the LT COMBO combination (tube and sheet metal) machine has allowed us to slowly step into the tube marketplace.** Proposing the laser processing for tube was not an easy task at the beginning; conversely, nowadays we cannot do without it”.

Mr. Viero stated that the “old fashion skilled metal fabricators” can’t be found. i.e. the men who were able to take a set of drawings and manufacture a perfect product. The laser systems are able to fill part of this gap by ensuring high machining accuracy: they make it possible to execute complex joints that can be assembled just like building blocks, so that no assembly mistakes will be made: this is ultimately the most significant advantage.

Mr. Dalla Costa has analyzed the same issue from a different viewpoint, by stressing the development of the needed professional skills, from the workshop fabricator who cuts, welds and does the labor, to the programmer who, at an earlier stage, draws the parts by means of CAD/CAM software and prepares the job orders for the automatic production systems. The old-time fab shops, where bars were cut by using a miter saw cutting to 45 degrees, to make frames, have evolved into the present-day laser cutting systems that make joints automatically; at the same time, the professional skills have changed and most of the job is now done in the office, where the job orders are prepared and developed and where the efficiency of the manufacturing process is the ace up the company’s sleeve. The above remarks provide the reason why BLM GROUP makes a great effort to provide the software applications aimed at making the operators’ programming work easier.

The ADIGE-SYS’s LT COMBO machine started working in 2004, devoting 95% of its processing time to machine sheet metal; yet, it progressed within a couple of years to cutting tubes 50% of the time. “The laser applications fully transformed the cutting technologies, by replacing such tools as the shearing and punching machines thanks to their superior cutting quality and speed. In addition to the above, the combination machine, featuring tube laser machining, has further expanded the size of our markets,” Mr. Giacobbe explained.

In 2012, the group made one further step forward, by establishing a company expressly dedicated mechanical processing. Today, Sovem is able to perform metal machining operations of every type (e.g. cutting, drilling, bending, welding, treatments, mechanical machining and assembling).

“After the LT COMBO machine had been introduced, it would have been reasonable to invest in a dedicated laser tube machine” Mr. Giacobbe explained, who worked on the justification. “As a matter of fact, we as a company decided to purchase a Lasertube system, until the new fiber laser technology intervened and disrupted the

from 6 → down to 2
minutes
for the production of grids

situation,” Mr. Giacobbe remarked.

After the fiber laser systems had been launched, new opportunities arose, which proved to be significant both for tube and sheet metal processing: the possibility of cutting highly reflective metals, the system speed and low consumption are major features as regards both tubes and sheet metal. Indeed, using the fiber laser technology only on tubes would involve some restrictions, since the fiber-based technology is nowadays a valid option for sheet metal as well. The ADIGE-SYS’s LC5 combination laser system was determined to be the perfect solution that allowed us to make use of the fiber laser source to machine two different types of items (i.e. sheet metal and tubes).

Currently, we employ the fiber laser technology to cut copper, aluminum and brass. The market has transitioned. In the past these

materials used to be cut by means of the water-jet; which today could not compete with laser. The fiber laser has opened new opportunities both for tubes and sheet metal fabrication, and the water-jet cutting method is now used only in cases where the thermal heat affected zone, even of a small extent, cannot be tolerated.

“The LC5 system allowed us to increase our production levels both for tubes and sheet metal. For instance, **when machining grids that used to be produced thousands of pieces at a time, the time needed for machining one single part has evolved, thanks to the LC5 system, from more than 6 minutes to less than 2 minutes,** in addition there is also a cost saving thanks to lower energy consumption,” Mr. Giacobbe explained. “The fiber cutting method still differs, from the edge quality viewpoint, when compared to CO2 laser, yet its advantages are quite significant,” Mr. Viero added.

“ The LC5 machine is highly versatile,” Mr. Giacobbe stated. “This versatility is of the utmost importance to us: we act mainly as subcontractors and, typically, we may happen to change between manufacturing processes up to ten times a day, i.e. we may need to shift from machining a piece of sheet metal to machining a tube within a very short time, or even stop machining sheet metal and start machining a tube and, then, resume the sheet metal machining: all of this is no doubt invaluable to us. Yet we had a doubt about purchasing a combination machine, i.e we worried about having dual capability but being only to use one at a time; in any case, flexibility is in fact the essential feature and the combination machine is actually used for two different markets, thus providing greater business opportunities by means of one single system ”

